[illegible], N.S.; SHARYGINA, L.I.; KASPAROVA, A.B.; [illegible], T.A.; GRINEVICH, N.N.; YUDINA, A.I.; SENICHENKO, N.P.; STOLYAROV, A.I.; PURSOVA, T.A.; KOZLOV, I.E., red.; [illegible], S.M., red.

[Leningrad and Leningrad Province in figures; a statistical abstract] Leningrad i Leningradskaia oblast' v tsifrakh; statisticheskii sbornik. Leningrad, Lenizdat, 1964. 290 p. (MIRA 18:1)

1. Leningrad (Province) Statisticheskoye oblastnoye upravleniye. 2. Statisticheskoye upravleniye goroda Leningrada (for Sigler, Sharygina, Kasparova, Yakovlev, Grinevich, Yudina). 3. Statisticheskoye upravleniye Leningradskoy oblasti (for Senichenko, Stolyarov, Pursova). 4. Nachal'nik Statisticheskogo upravleniya goroda Leningrada (for Kozlov).

STOLYAROV, A.K.

Using ferrites in waveguide technology. Elektrosviaz' 11 no.5:34-45 My '57. (MIRA 10:12)
(Wave guides)

MIKAYELYAN, A.L.; STOLYAROV, A.K.

Ferrite waveguide valves using ferromagnetic resonance. Radiotekhnika 12 no.10:17-30 O '57. (MLRA 10:11)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S. Popova (for Mikayelyan).
(Wave guide)

[illegible]

X СЕКЦИЯ ФЕРРИТОВЫХ УСТРОЙСТВ СВЧ

Руководитель А. Л. [illegible]

11 июня

(с 10 до 16 часов)

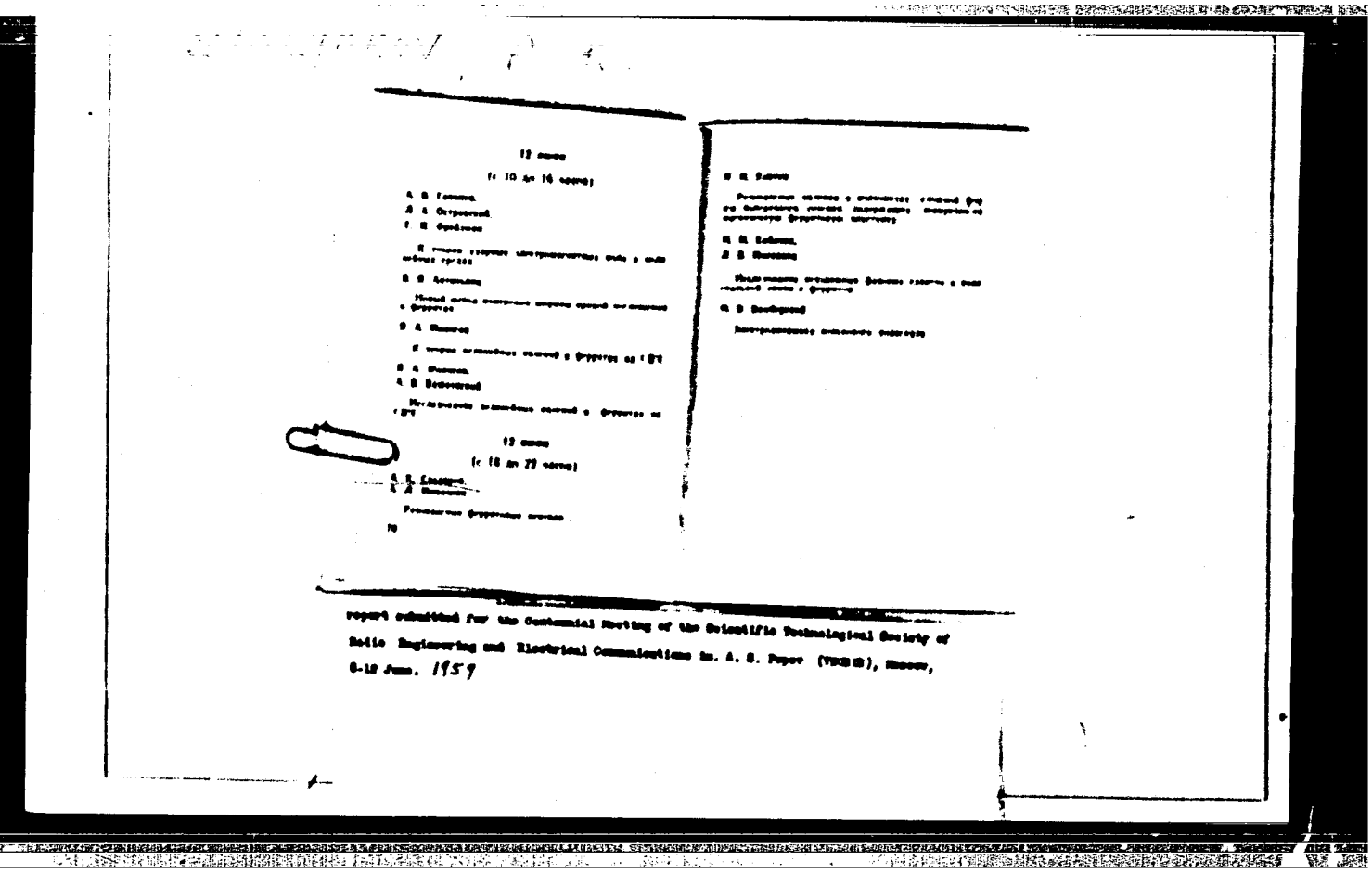
[illegible]

11 июня

(с 18 до 22 часов)

[illegible]

Report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORiE), Moscow, 8-12 June. 1959



report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNIIR), Moscow, 8-12 June. 1959

SOV/109-4-7-2/25

AUTHORS: Mikaelyan, A.L. and Stolyarov, A.K.

TITLE: Surface Waves in Ferrite Waveguides

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 7, pp 1079 - 1093 (USSR)

ABSTRACT: First, three dielectric waveguides are briefly discussed. The properties of these systems are summarised in the table on p 1080. The first system is a dielectric layer (see the top figure in the table). The second system is a waveguide with a dielectric layer and a single side wall; this is illustrated by the middle figure in the table. The third system is in the form of a waveguide whose one wall is covered with a dielectric layer (see the lower figure in the table). Similar systems containing ferrites instead of dielectrics are then analysed. The first ferrite system is illustrated in Figure 1. It is shown that the field components of the H waves for this system are given by Eqs (1), while the formula for the evaluation of the propagation constant is expressed by Eq (2) (see the earlier article of the author - Ref 1).

Card1/4

Surface Waves in Ferrite Waveguides

The equations are employed to represent the characteristics of the system by means of a number of graphs. These are shown in Figures 2-5. Figure 2 represents the propagation constants of the waves propagating along a ferrite layer having a width $x_o/\lambda_o = 1$ (Figure 1). Figures 3 represent the structure of the field propagating along the ferrite layer. Figure 4 shows the propagation constant for the waves propagating along a layer having a width of $x_o/\lambda_o = 0.2$. Figure 5 illustrates the dependence of the propagation constants for a lower-type wave on the width of the ferrite layer. Next, a ferrite-filled waveguide with one wall is considered (Figure 6). The expressions for the fields in this waveguide are given by Eq (7), while the propagation constant can be evaluated from Eq (8) (Ref 1). The properties of the waveguide of Figure 6 are illustrated in Figures 7,8,9. Figure 7 illustrates the propagation constant as a function of frequency for a ferrite plate having a thickness $x_o/\lambda_o = 1$. Figure 8 shows the cut-off effect in the waveguide as a function of

the width of the ferrite. The propagation constants for a waveguide having a ferrite width $x_o/\lambda_o = 0.15$ is illustrated in Figure 9. Finally, a standard waveguide, whose one wall is coated with a layer of ferrite, is considered. The expressions for the fields in this system are known and can be represented by Eqs (11). The propagation constants can be evaluated from Eq (12), which describes all the waves which can exist in the system. The properties of this waveguide are illustrated in Figures 11-14. Figure 11 shows the propagation constants for a ferrite plate having a width of $0.2\ \lambda_o$. The dependence of the propagation constants on the relative thickness of the ferrite is illustrated in Figure 12; the calculations were made for $\mu_\perp = -5.4\ \mu_o$. The dependence of the propagation constants on the relative thickness of the ferrite for $\mu_\perp = +0.36\ \mu_o$ is shown in Figure 13. The phase and group velocities of the

ferrite surface waves are illustrated in Figure 14. Some experimental work was carried out to corroborate the theoretical results. The experiments were carried out on a rectangular ferrite-filled waveguide and the results are illustrated in Figure 15. This shows the attenuation of the direct (dashed curves) and reversed (solid curves) waves on the magnitude of the external magnetic field for the ferrite plates of various widths. The experiments confirm the possibility of producing a waveguide which would propagate the waves in one direction. There are 15 figures, 1 table and 4 references, of which 3 are English and 1 Soviet.

SUBMITTED: August 7, 1958

9,1900 [illegible]

77772
SOV/109-5-2-12/26

AUTHORS: Mikaelyan, A. L., Stolyarov, A. K., Koblova, M. M.

TITLE: Resonance Ferrite Systems With Large Valve Ratio

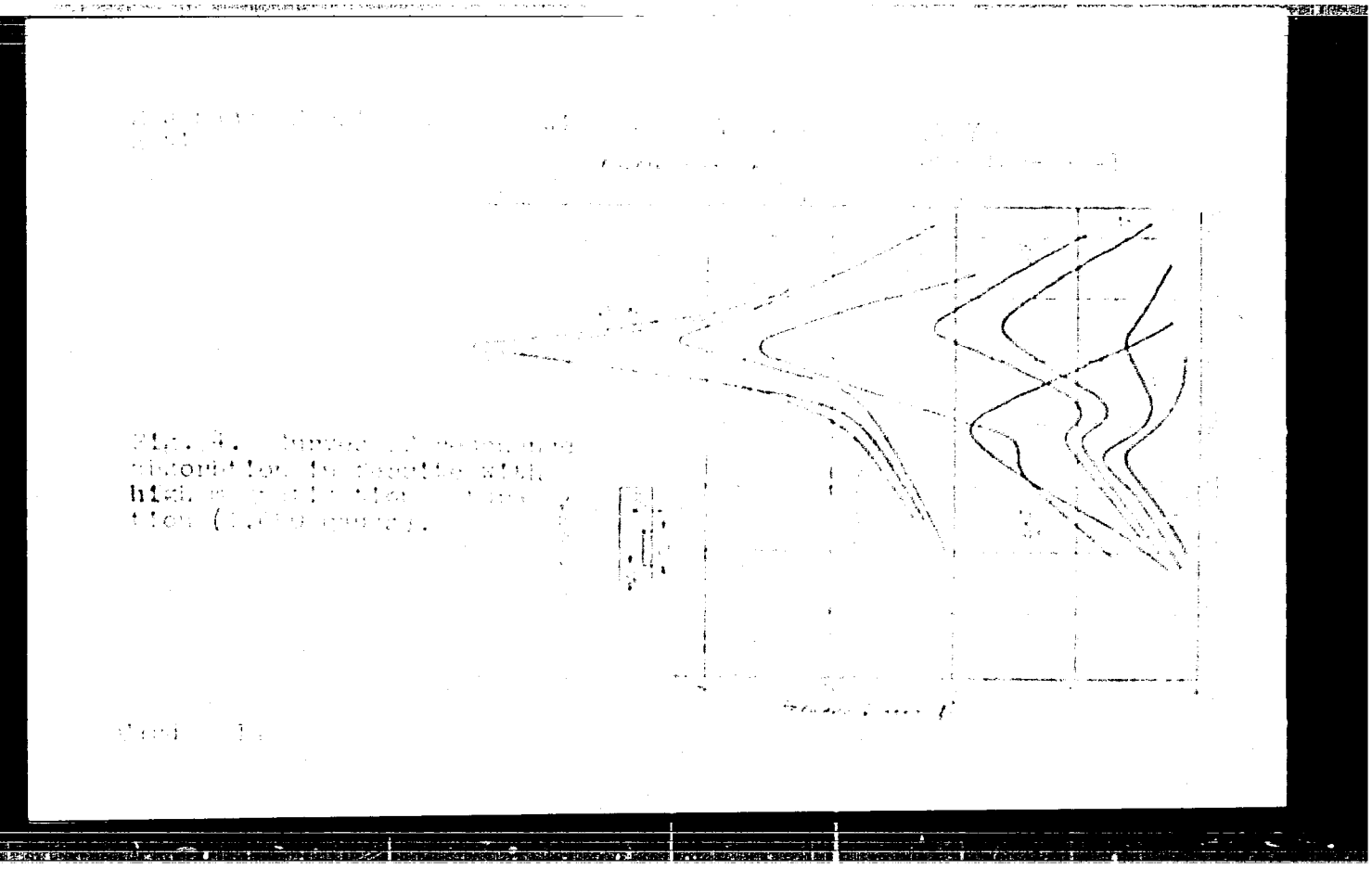
PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 2, pp 2[illegible] - 277 (USSR)

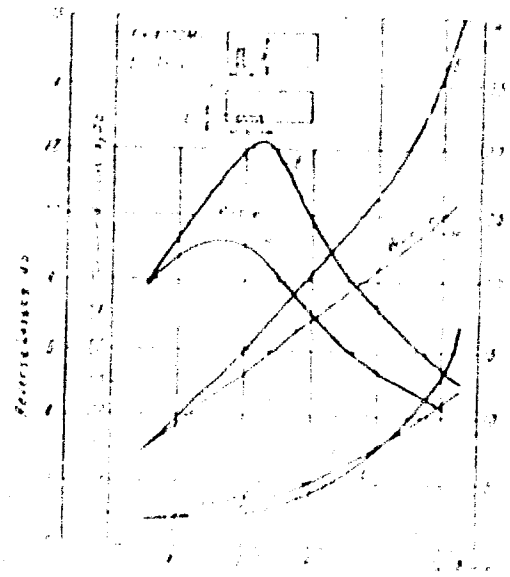
ABSTRACT: [illegible] previous work by the authors ([illegible] 1957, [illegible]) [illegible]

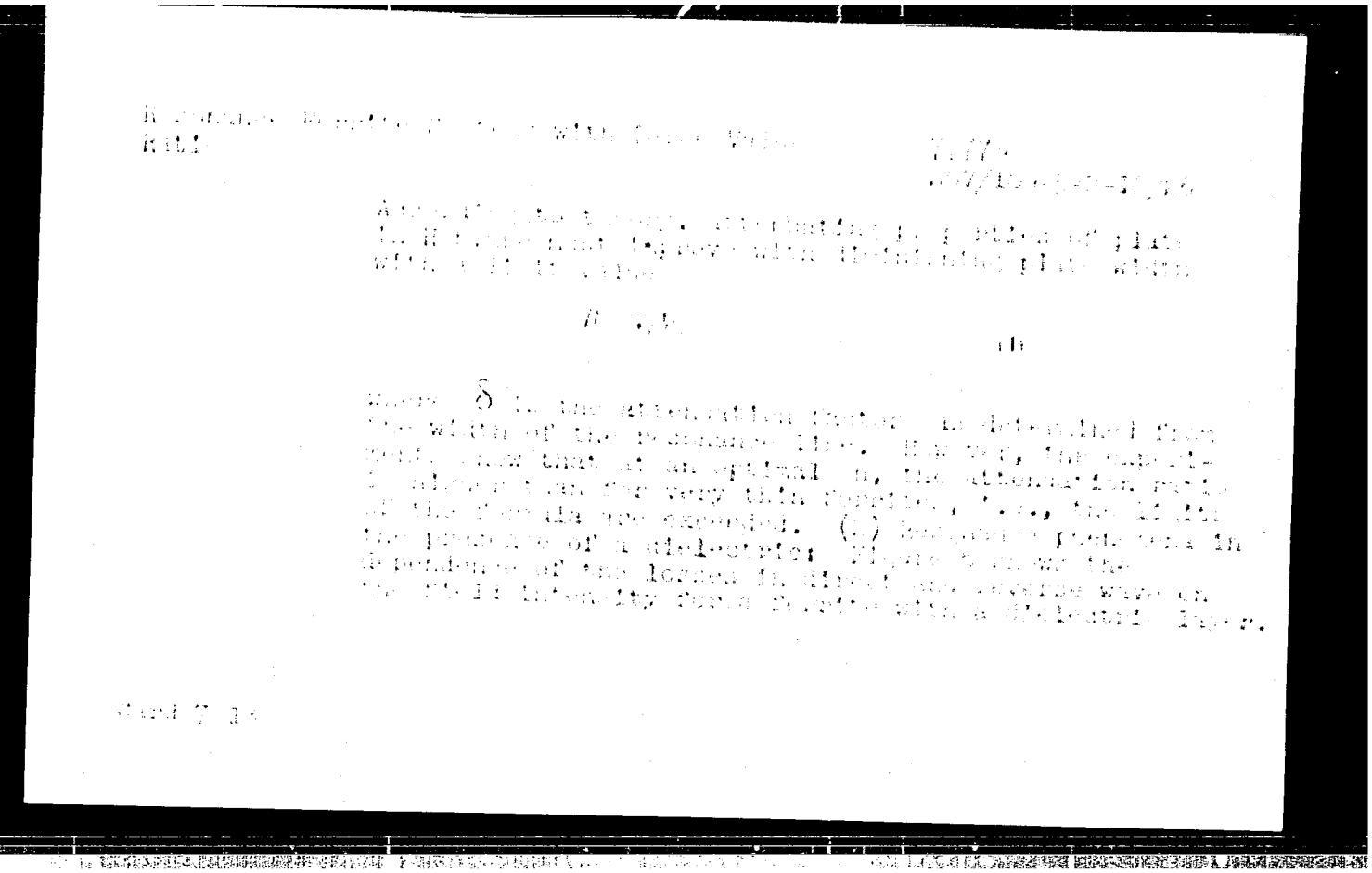
[redacted]

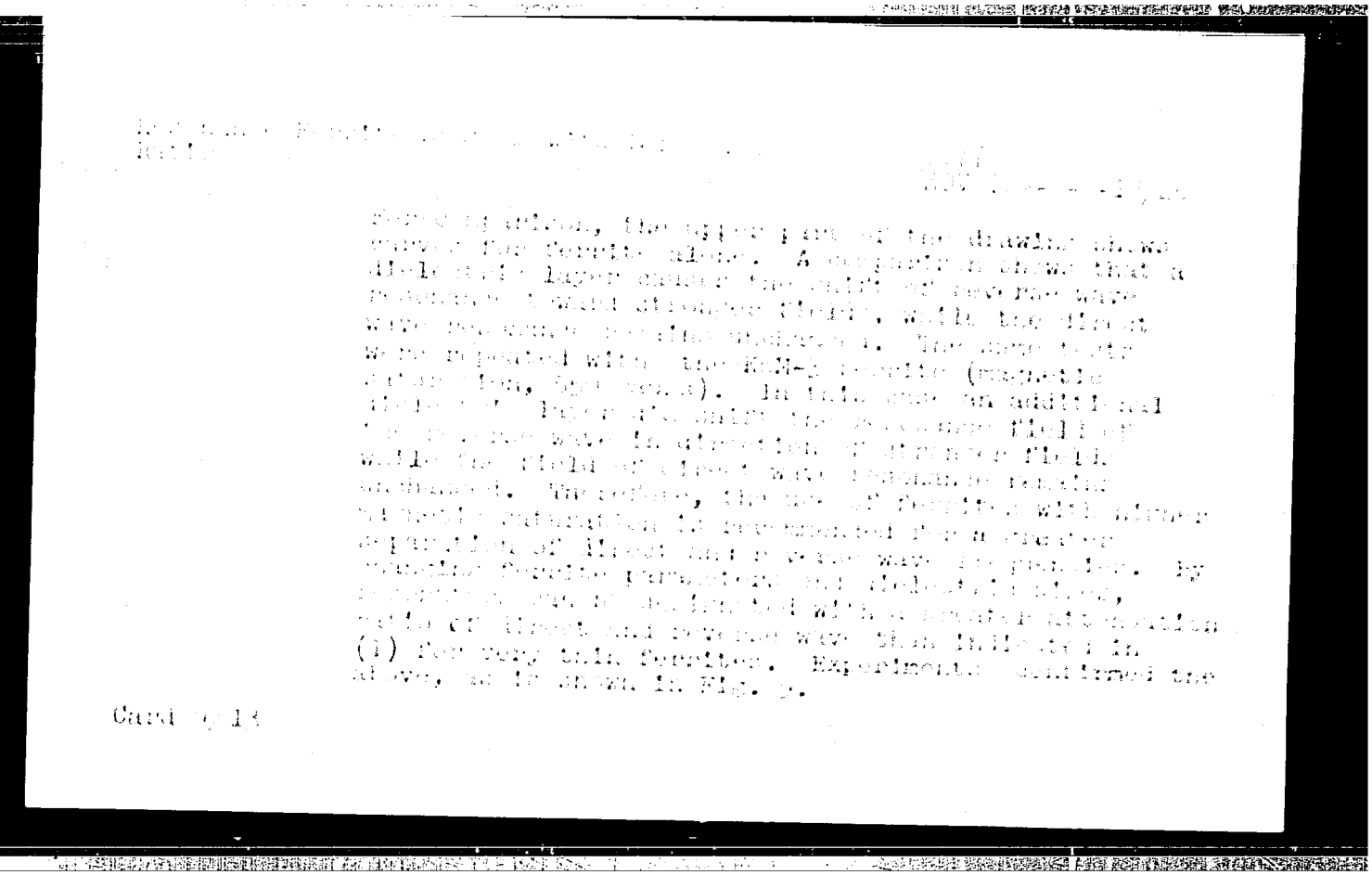
[redacted] separation in the resonance frequencies of the direct and reverse waves is observed only in cases when the ferrite plate has an adequate thickness and, consequently, distorts the field structure of an empty waveguide. If very thin ferrite plates are used, the [redacted] field converges.

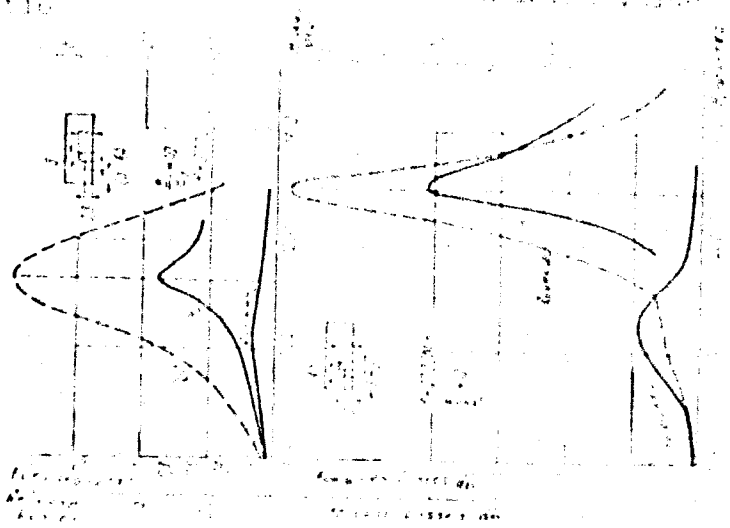
[redacted]

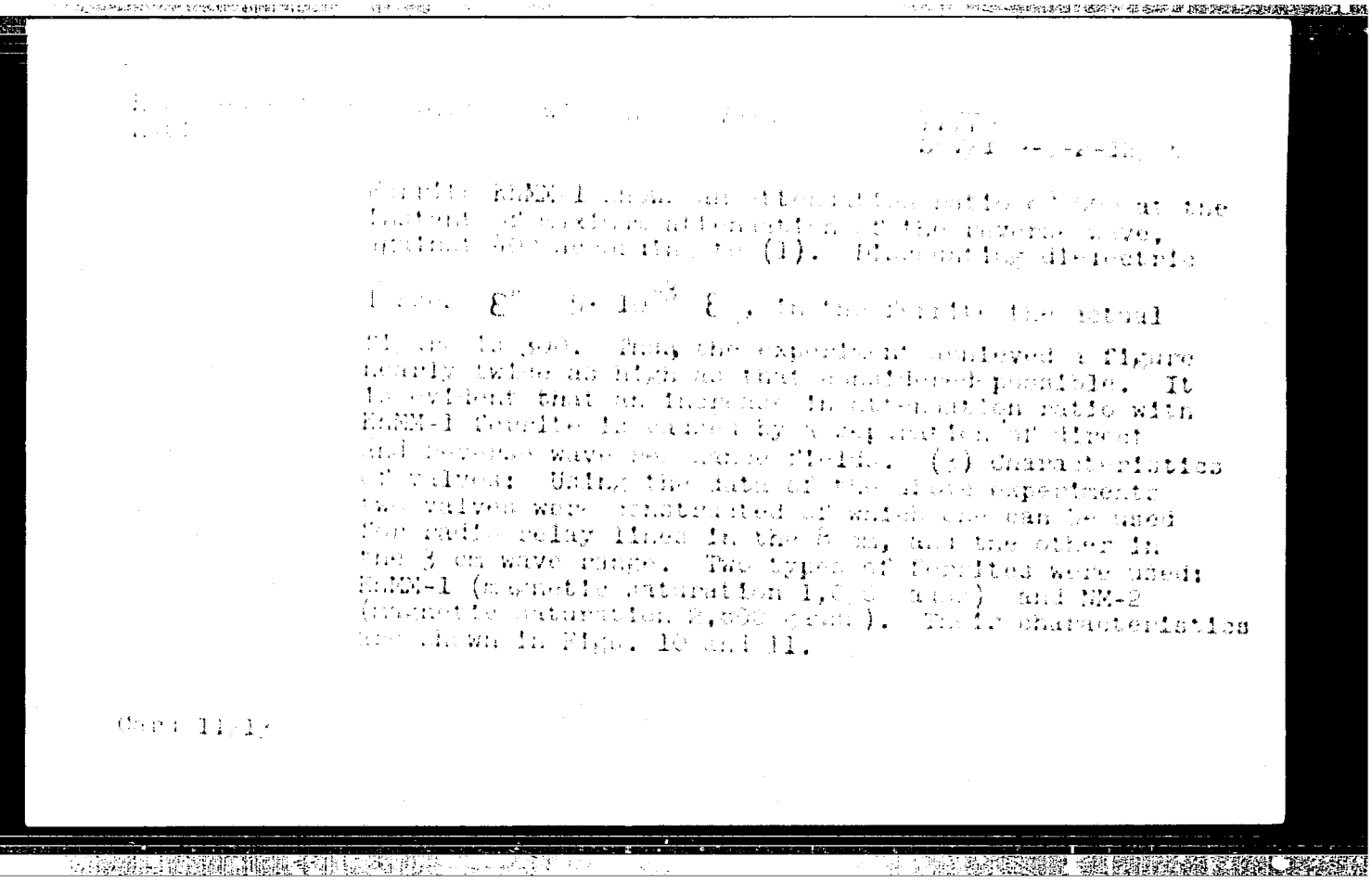


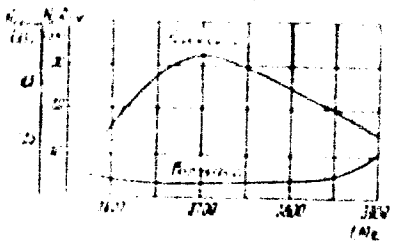


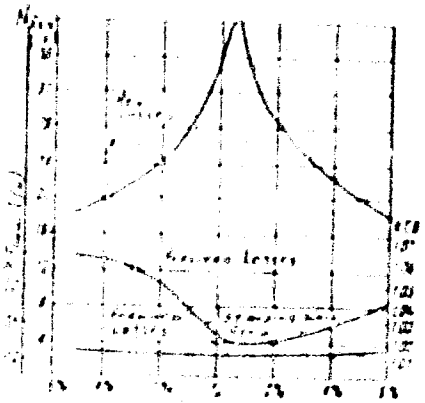


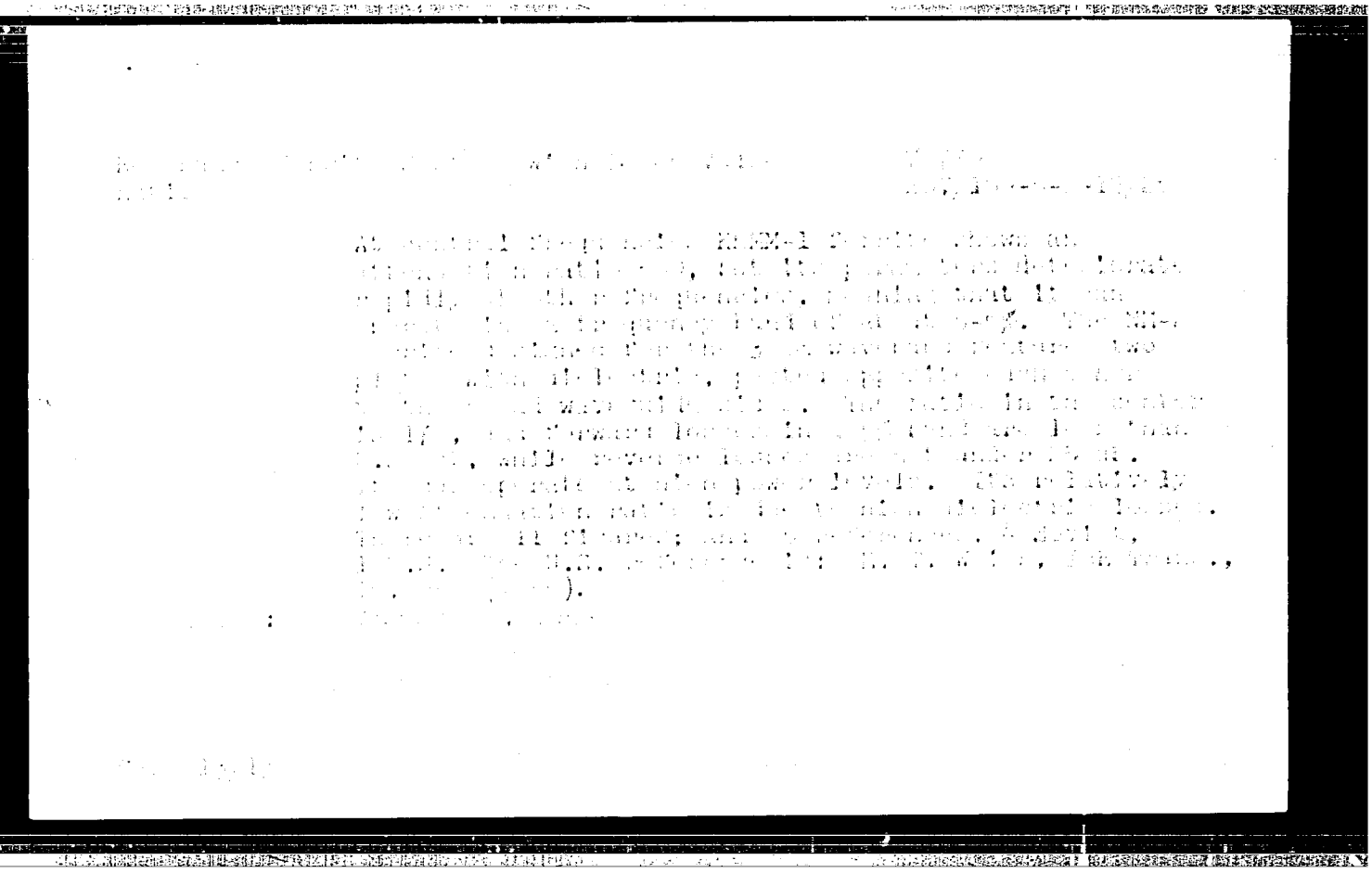












69917

S/109/60/005/05/005/021
E140/E435

9.1300

AUTHORS: Stolyarov, A.K. amd Mikaelyan, A.L.

TITLE: The Approximate Theory of Ferrite Resonant Isolators

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5, pp 740-761 (USSR)

ABSTRACT: This paper was presented at the Jubilee Session of the A.S.Popov Scientific-Technical Radio Engineering and Electrical Communications Society, June 12, 1959.

An approximate theory valid for thin ferrite plates is developed, clarifying the effects of the auxiliary dielectric layer. Rectangular and strip waveguides are considered. The restriction to thin ferrite plates is due to the use of the quasi-static approximation. The field in the part of the waveguide not filled by the gyrotropic material must be considered unchanged by introduction of the ferrite. The case of the ferrite in the E-plane of a rectangular waveguide has been studied by the present authors (Ref 3) and the present paper reproduces only the basic results. The case of the ferrite plate in the H-plane is then considered in detail. It is

Card 1/3

1

The Approximate Theory of Ferrite Resonant Isolators

found that the optimum position of a ferrite plate in a waveguide depends on its width h. For wider plates the optimal position is closer to the side wall of the waveguide. The position is independent of ferrite parameters and is a function only of waveguide dimensions and wavelength. This distinguishes the H-system from the E-system, in which the optimum position of the ferrite depends substantially on the ferrite parameters. The maximum isolation ratio obtainable is the same for both types of isolator. For the H-type isolator, the optimum condition is that in which the magnetic field in the ferrite has a left-hand circular polarization. When the ferrite begins to occupy more than 7% of the waveguide wall width, the isolation ratio of the system deteriorates. This is due to the fact that for a wide plate the left-hand circular polarization of the magnetic field exists only at the central point. In resonant isolator systems the following conclusions are drawn:
1. The maximum isolation ratio is independent of the
Card 2/3 shape of ferrite plate when the quasi-static approximation

4

The Approximate Theory of Ferrite Resonant Isolators

is valid; 2. The optimum location of the ferrite in the waveguide depends on its shape and, in the E-plane, on the ferrite parameters. Passing to consideration of the effect of dielectric, the author concludes that the maximum isolation ratio obtainable from a ferrite-dielectric plate is independent of the dielectric constant and cannot exceed the ratio obtained in a waveguide with ferrite without dielectric layer. The role of the dielectric is the stabilization of the field configuration inside the ferrite over a broad band of frequencies but, due to the presence of loss in the dielectric, optimum thickness and dielectric constant of the dielectric exist. The theory neglects a number of phenomena observed with thick ferrite plates not completely filling the waveguide height, such as shift of resonant frequency of the forward wave in comparison with the backward wave, the existence of an optimum height for the E-type ferrite plate etc. There are 27 figures, 2 tables and 3 Soviet references.

SUBMITTED: August 17, 1959

Card 3/3

MIKAELYAN, A.L.; STOLYAROV, A.K.

Resonant ferrite rectifiers. Elektrosviaz' 14 no.8:42-47 Ag '60.
(MIRA 13:9)

(Microwaves) (Wave guides)

MIKAELYAN, A.L.; STOLYAROV, A.K.

Question on the design of resonant ferrite valves. Elektrosviaz' 14 no.9:42-51 S '60. (MIRA13:9)
(Waveguides)

S/108/61/016/011/001/007
D201/D304

9,1900 (1127)

AUTHORS: Mikaelyan, A.L. and Stolyarov, A.K., Members of the Society

TITLE: A 'cut-off' type ferrite switch

PERIODICAL: Radiotekhnika, v. 16, no. [illegible] 6 - 17

TEXT: This paper was presented at the Jubilee Session of NTOR and E im. A.S. Popov, June 14, 1959. In an earlier article, the authors investigated the properties of a wave propagation in a rectangular waveguide with a transversely magnetized ferrite layer (Ref. 1: Radiotekhnika i elektronika, v. 4, no. 7, 1959). In the present article, the authors investigate the independent effects in the cut-off waveguide with magnetized ferrite in order to establish the required conditions for obtaining the type of switch described in the title. The main problem of analyzing a cut-off waveguide with ferrite reduces to evaluating losses in the forward and backward directions and to determining their dependence on frequency, ferrite parameters, transverse dimensions of waveguide etc. The calculati-

Card 1/5

ons are extremely involved and result in solutions of a transcendental equation in the complex plane, a problem difficult even when being solved with an electronic computer [Abstractor's note: The computers calculations were made by Engineer V.P. Anan'yeva]. There is another delicate point in these calculations and that is that the cut-off waves in a waveguide with a ferrite layer, are determined not by the imaginary, but by complex propagation constants even when no losses are present. Calculations have shown that with losses present in the ferrite the energy within the empty portion of the waveguide does not change while the backward energy going through the ferrite is heavily attenuated. Thus, when losses are present, there is in a cut-off waveguide an energy beam in the direction of propagation; this becomes smaller in proportion to the increase in system losses. It follows that if ferrite losses are finite, matching arrangements may be used to tune the system and to dissipate in the ferrite all ingoing power. The losses of the forward wave are related to the magnitude of γ_y'' (the propagation constant γ_y is complex and equal $\gamma_y = \gamma_y' + i\gamma_y''$) in a linear manner.

Card 2/5

29585
S/108/61/016/011/001/007
D201/D304

A 'cut-off' type ferrite switch

The backward wave, being a cut-off wave is heavily attenuated. When losses are absent the forward wave is shown to be fully reflected from the switch input. But then the forward wave becomes fully reflected from the other end of the switch, since the system then represents a reactive four-pole with equal moduli of a transfer coefficient in both direction. Thus the system cannot operate as a switch with no ferrite losses as it would not be consistent with the law of conservation of energy. When losses are present in the ferrite, the backward wave is fully absorbed in the switch and hence, the forward wave will be propagated with litte attenuation. The backward wave may be impelled to go into the switch by using any matching element. The smaller the ferrite losses, the narrower is the matching range. Also, a switch with high back-to-front ratio is obtained for ferrites with small losses. In an actual example which is not optimum, at a wavelength of 3.2 cm the attenuation of the backward wave is 26 db/cm and is practically independent of ferrite losses δ. The forward wave attenuation is 0.35 db/cm at $\delta = 0.01$ and 0.7 db/cm at $\delta = 0.02$. The measurements carried out at the field strength of $H_o = 2200$ oersted showed that $\beta_{bck} \sim 63$ db, β_{dir}

Card 3/5

A 'cut-off' type ferrite switch

$\sim$6, SWR = 5. The SWR for a cut-off switch is, therefore, rather high. By introducing matching from both ends, the attenuation of forward waves is reduced to β_{co} = 1 db at SWR = 1.1. Analysis of the effect of the ferrite layer, waveguide dimensions has shown that in evaluating the attenuation of a cut-off type switch in the backward direction, it is enough to take into account the lower cut-off modes of waves. The ferrite surface wave at $\mu_1 < 0$ may propagate with small losses in the waveguide, provided the ferrite thickness is small. The experimental frequency characteristics show a slow decrease in the backward wave attenuation with increasing frequency which is said to be due to the fact that the electric waveguide dimensions increase and these dimensions have been found to affect the attenuation of the backward wave. The attenuation frequency characteristic of the forward wave is increased sharply at both ends due to approaching to the ferrite resonance and to the region of dispersion near $\mu_1 = 0$. Proper choice of the latter can make the working frequency band of the cut-off switch 30 ÷ 35 %. In general, good agreement has been found between theory and experi-

Card 4/5

A 'cut-off' type ferrite switch

ments. There are 17 figures and 2 Soviet-bloc references.

ASSOCIATION: Nauchno tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communication im.A.S. Popov) [Abstractor's note: Association taken from 1st page of journal]

SUBMITTED: March 15, 1961

X

L 17819-63

ACCESSION NR: AP3004953 S/0108/63/018/008/0074/0080

140
49

AUTHOR: none

TITLE: Nineteenth All-Union Session of NTORIE im. A. S. Popov (see "Association") Celebrating the Day of Radio, closed on 11 May 1963

SOURCE: Radiotekhnika, v. 18, no. 8, 1963, 74-80

TOPIC TAGS: conference, session, electronics conference, electronics session

ABSTRACT: The Session included 2 plenary meetings and 18 section meetings. There were 272 reports delivered by Soviet and 12 reports delivered by foreign scientists and engineers. The total number of specialists participating in the Session was 1,800, including 25 foreign representatives. Four reports before the first plenary meeting were made by: V. I. Siforov, Corresponding Member of AN SSR and Chairman of the NTORIE Central Board, on the laws of development of natural sciences and electronics; Academician A. L. Mints on toroidal

Card 1/4

electron accelerators; Professor G. Y. Braude on the 25th anniversary of Soviet TV; and a French engineer, A. Aysberg, on international publications in radio and electronics. Two reports before the closing plenary meetings were made by: M. L. By*khovskiy, Doctor of technical sciences, on the use of cybernetics in medical diagnoses, and L. P. Krayzmer, Candidate of technical sciences, on the problems of storing information in cybernetical systems. The Section of Theory of Information, under B. R. Levin, heard and discussed 22 reports on coding theory, signal synthesis, increasing the reliability of information, detecting and isolating signals from noise background, noise immunity of reception, correlation analysis, statistics in electronic channels, and accuracy of reliability prognoses. Those participating in the Section work were: L. M. Fink, Yu. S. Lezin, Yu. L. Zorokhovich, Yu. M. Marty*nov, L. M. Mashbits, L. D. Kislyuk, G. A. Shastova, Y. T. Goryainov, Y. I. Tikhonov, P. V. Mazurin, I. A. Tsikin, N. P. Khvorostenko, D. D. Klovskiy, Yu. I. Samoylenko, A. A. Zyuzin-Zinchenko, V. N. Teterev, A. A. Pirogov, M. A. Sapozhkov, I. T. Turbovich, G. I. Tsemmel', O. A. Petrov, Yu. G. Pollyak, G. V. Maly*shev, G. A. Ball, A. S.

Shvy*gin, S. F. Simovskaya, I. V. Sukharevskiy, A. I. Velichkin, V. S. Borodin, Dr. D. A. Haffman (Lincoln Laboratory, MIT), A. I. Alekseyev, B. B. Gurfinkel', A. F. Terpugov, A. F. Fomi..., and V. S. Bleykhman. The Section of Cybernetics, under B. S. Fleyshman, dealt with reports on the theory of systems, investigation of operations, and recognition of patterns. Participating were: V. M. Berezhnov, B. V. Gnedenko, G. P. Basharin, V. V. Ry*kov, A. A. Ydovin, A. O. Kravitskiy, A. Ye. Basharinov, N. I. Ananov, K. P. Kirdyashev, A. L. Lunts, V. L. Brailovskiy, V. A. Kondrat'yeva, N. S. Misyuk, N. A. Lepeshinskaya, O. A. Liskovets, and A. S. Mastykin. The Section of SHF Ferrite Devices, under A. L. Mikaelyan, had a report on new waveguide-ferrite devices by A. L. Mikaelyan and M. M. Koblova; a report on a circular waveguide with a longitudinally-magnetized bar by G. I. Veselov; a report on cross-shaped circulators by A. K. Stolyarov, I. P. Tyukov, and V. M. Oranzhereyev; and a report on $(0.9-10)\times10^{9}$-cps coaxial valve by K. G. Gudkov. The Section of Semiconductor Devices, under Ye. I. Gal'perin, carried reports on tunnel diodes and transistors in pulsed and rf circuits. Participating were: Kochish Miklosh

L 17819-63

ACCESSION NR: AP3004953

27

(Hungary), T. M. Agakhanyan, Ladislaw Gavlik (Praha), V. N. Konstantinovskiy, S. A. Savel'yev, O. A. Chelnokov, I. N. Pusty*nskiy, V. A. Shalimov, V. V. Klimov, N. A. Netsvetaylov, Yu. I. Vorontsov, I. V. Polyakov, V. V. Kukushkin, N. A. Khokhlachev, K. F. Berkovskaya, V. L. Kreytser, V. A. Il'in, Yu. V. Koval'chuk-Ivanyuk, I. G. Nekrashevich, V. I. Loyko, I. F. Savitskaya, D. A. Taumin, L. A. Zubritskiy, G. P. Chursin, G. V. Bagrov, Ye. G. Belen'kov, and V. V. Borzenko. Orig. art. has: no figure, formula, or table.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 00 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: GE NO REF SOV: 000 OTHER: 000

Card 4/4

L 23497-66 EWT(1)/EWA(h)

ACC NR: AP6009844 SOURCE CODE: UR/0413/66/000/004/0035/0035

AUTHOR: Stolyarov, A. K.; Naumov, I. A.

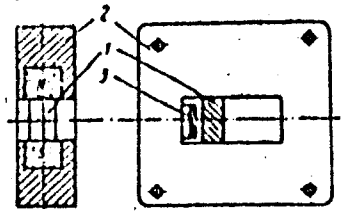
ORG: none

TITLE: A ferrite waveguide rectifier. Class 21, No. 178872

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 35

TOPIC TAGS: waveguide, rectification, ferrite

ABSTRACT: This Author's Certificate introduces a ferrite waveguide rectifier which contains a section of rectangular waveguide, a ferrite element and an absorbing load made in the form of a semiconductor film applied to a dielectric substrate. The overall dimensions are reduced by making this ferrite element in the form of a magnetized column which is located symmetrically with respect to the axis of the waveguide. The absorbing load is placed on the narrow wall of the rectangular waveguide opposite the ferrite element.



1--ferrite column; 2--waveguide; 3--absorber

SUB CODE: 09/ SUBM DATE: 19Apr65/ ORIG REF: 000/ OTH REF: 000

UDC: 621.372.837

Card 1/1

L 13852-66 EWT(1) IJP(c)
ACC NR: AP6030578 SOURCE: UR/0413/66/000/016/0058/0058

INVENTOR: Stolyarov, A. K.; Naumov, I. A.

ORG: none

TITLE: Ferrite isolator. Class 21, No. 184946

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 58

TOPIC TAGS: rectangular waveguide, circular waveguide, waveguide element, ferrite isolator

ABSTRACT: An Author Certificate has been issued for a ferrite isolator (see Fig. 1) designed as a magnetized ferrite element asymmetrically

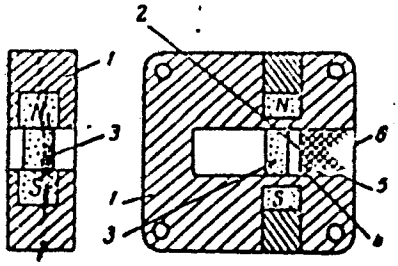


Fig. 1. Ferrite isolator

1 - Rectangular waveguide; 2 - its side wall; 3 - ferrite element; 4 - circular waveguide; 5 - dielectric; 6 - absorbing load.

Card 1/2 UDC: 621.372.853.2

Acc Nr: AT6012275 Source Code: 0000/66/000/000/0053/0056

AUTHOR: Stolyarov, A. K.; Tyukov, I. P.

ORG: none

TITLE: Theoretical problems of three-port circulators constructed of dielectric filled waveguides

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 2d, 1966. Sektsiya kvantovoy elektroniki. Doklady. Moscow, 1966, 53-56

TOPIC TAGS: waveguide, wave propagation, dielectric waveguide

ABSTRACT: The precise expressions for wave propagation in a three-port circulator fabricated using dielectric filled waveguides were obtained from the solution of the diffraction problem for wave dispersion in a symmetrical H-plane waveguide junction. The following relations may be derived assuming ideal circulation conditions:

$$f_1\left(k, l, \frac{a}{\lambda}\right) = \frac{J_1(x)x}{J_2(x)} - R_1 = 0,$$

$$\varepsilon_1\left(k, l, \frac{a}{\lambda}\right) = \frac{S_0(l)R_1}{\operatorname{tg}\left\{\varphi_{-1} + |N_1(l) - N_0(l)| + \frac{\pi}{3}\right\} - L_0(l)},$$

Card 1/2

$$S_1(t) = \sqrt{\left(\frac{k}{\mu}\right)^2 - \left(\frac{\mu_\perp}{S_1(t)}\right)^2 + \frac{2}{\operatorname{tg} 60^\circ}\frac{k\mu_\perp}{\mu S_1(t)}},$$

$$\varphi_1 = \operatorname{arctg}\left\{\frac{kS_1(t)}{\mu\mu_\perp} \times \right.$$

$$\left. \times\left(1 \pm \sqrt{\left[\operatorname{tg} 60^\circ - \frac{\mu\mu_\perp}{kS_1(t)}\right]\left[\operatorname{tg} 30^\circ + \frac{\mu\mu_\perp}{kS_1(t)}\right]}\right)\right\},$$

$$x = t\sqrt{\varepsilon\mu_\perp} = t\sqrt{\varepsilon\frac{\mu^2 - k^2}{\mu}},$$

where $S_0(t)$, $L_0(t)$, $H_0(t)$, $S_1(t)$, $L_1(t)$, $H_1(t)$ depend only on the values of t, the diameter, and a is the width of the wide waveguide wall; $2r$ is the diameter of the ferrite cylinder, ε_ϕ,ε_ϑ are the dielectric constants of the ferrite and the surrounding space, and μ,k are the tensor components of ferrite permeability. The plots of energy transfer coefficients into port 2 and port 3 are given. Orig. art. has: 3 figures.

SUB CODE: 09,20/ SUBM DATE: 11Apr66/ ORIG REF: 001/ OTH REF: 001

ACC NR: AT6026996 SOURCE CODE: UR/0000/66/000/000/0343/0349

AUTHORS: Gushchina, Z. M.; Stolyarov, A. K.; Fabrikov, V. A.;

ORG: none

TITLE: Ferrite materials for alternating field valves

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fizikokhimicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 343-349

TOPIC TAGS: ferrite, magnetic property, magnetic hysteresis, magnetization curve

ABSTRACT: Several ferrite materials for use in alternating field valve installations were developed. The choice of starting materials and experimental conditions was guided by the theoretical considerations of A. L. Mikaelyan (Teoriya i primeneniye ferritov na sverkhvysokikh chastotakh. Gosenergoizdat, 1963), and the experimental conditions are tabulated. The Curie temperature, the resonance line width, and the thermal dependence of magnetization of the synthesized ferrites were determined. The experimental results are shown graphically (see Fig. 1). It is concluded that ferrites of type P-28, P-43, and M-274 are suitable materials for use in alternating field

Card 1/2

ACC NR: AT6028970

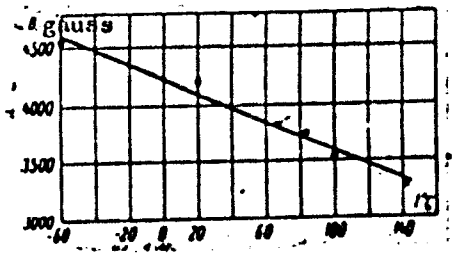


Fig. 1. Temperature dependence of magnetization of ferrite M-274

valve installations. Orig. art. has: 2 tables, 6 graphs, and 2 equations.

SUB CODE: 11/ 20/ SUBM DATE: 22Dec65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

Card 1/1

L 1057-66 EWT(d)/EPA(s)-2/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EWA(c) JD/HM

ACCESSION NR: AP5022349 UR/0135/65/000/009/0015/0017
621.791.75.01.004.5

AUTHOR: Pankov, I. S. (Engineer); Stolyarov, A. P. (Engineer) 41 B

TITLE: Remote control systems for monitoring the movement of the welding arc along the weld line

SOURCE: Svarochnoye proizvodstvo, no. 9, 1965, 15-17

TOPIC TAGS: remote control system, arc welding, selsyn, time relay, time optimal control, closed circuit TV, automatic welding

ABSTRACT: Three possible solutions of the problem of enabling the operator at the control panel to monitor and correct the position of the welding arc relative to the weld line are presented with respect to the welding of circular shell seams. Solution 1: a selsyn system transmitting arc readings from the weldment and welding machine to the remote control panel. Solution 2: welding based on time reckoning by means of electric coupling, where time begins to be reckoned with the initial instant of arc excitation. Solution 3: welding with visual observation of welding zone by means of closed-circuit tele-

Card 1/2

L 20[illegible]

ACCESSION NR: AP5022349

vision. These three monitoring systems were tested only for the case of the welding of circular seams. No experience has as yet been gained in employing them in the rectilinear butt welding of sheets, but such an utilization of these systems is in principle possible. Furthermore this will make possible the further automation of welding operations: for example, in the monitoring system based on time reckoning the time relay may, owing to feedback to the automatic welding machine, be utilized to automate the operations of disconnection of the systems on completion of welding. Orig. art. has: 5 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 003 OTHER: 000

Card 2/2

[redacted]

MERKLIN, R.L.; MOROZOVA, V.G.; STOLYAROV, A.S.

Biostratigraphy of Maikop deposits in southern Mangyshlak. Dokl.AN SSSR 133 no.3:653-656 Jl '60. (MIRA 13:7)

1. Vsesoyuznyy institut mineral'nogo syr'ya. Predstavleno akademikom A.L.Yanshinym.
(Mangyshlak Peninsula--Paleontology, Stratigraphic)

KOCHENOV, A.V.; STOLYAROV, A.S.

Some forms of iron sulfide segregation in the cross section of Maikop deposits of southern Mangyshlak. Dokl.AN SSSR 133 no.6:1412-1415 Ag '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya. Predstavleno akad. N.M.Strakhovym.
(Mangyshlak Peninsula--Iron sulfides)

STOLYAROV, A.S.; SHLEZINGER, A.Ye.

Tectonics and basic characteristics of the development of the structural plan in the South Mangyshlak Plateau. Biul. MOIP. Otd.geol. 37 no.3:3-26 My-Je '62. (MIRA 15:10)
(Mangyshlak Peninsula—Geology, Structural)

MERKLIN, R.L.; STOLYAROV, A.S.

Solenoy horizon of the western Kopet-Dag. Biul.MOIP.Otd.geol. 37 no.5:61-68 S-O '62. (MIRA 15:12)
(Kopet-Dag--Paleontology,Stratigraphic)

KOZYAR, L.A.; STOLYAROV, A.S.

Palynological foundation of the stratigraphic breakdown of the Maikop deposits of southern Mangyshlak. Dokl.AN SSSR 144 no.4:882-885 Je '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya. Predstavleno akademikom A.L.Yanshinym.
(Palynology) (Mangyshlak Peninsula—Geology, Stratigraphic)

NAGOISKIY, M.P.; SANDANOV, I.B.; STOLYAROV, A.S.

Eocene sediments in the margins of the Tom'-Kolyvanskaya fold zone and minerals associated with them. Trudy SNIIGGIMS no.25:103-108 '62. (MIRA 16:4)

(Siberia—Geology)

SOV/96-59-3-4/21

AUTHORS: Baks, L.L., Candidate of Technical Sciences
Stolyarov, A.V., Engineer

TITLE: Steam-Gas Condensing Power Stations and Their Comparative Thermal Efficiencies (Parogazovyye kondensatsionnyye elektrostantsii i ikh sravnitel'naya teplovaya effektivnost')

PERIODICAL: Teploenergetika, 1959, Nr 3, pp 19-25 (USSR)

ABSTRACT: It is timely to consider the most efficient way of using gas as a power-station fuel. Stations may operate with gas turbines, with steam turbines or with a combination of the two. So far a procedure for comparing these types of power station has not been formulated. Fundamentally, the combined station consists of a steam boiler and gas-turbine combustion chamber as a single unit: a high-pressure steam generator operates on the gas side under a pressure set up by the compressors of the gas-turbine set. With this method of operation, the heating surfaces are small and much less than the normal amount of metal is required. In the steam generator the amount may be only 0.55 - 0.70 kg/kg steam, i.e. a quarter of that in an ordinary boiler. In comparing a gas-fired

Steam-Gas Condensing Power Stations and Their Comparative Thermal Efficiencies

steam station and a combined station (without intermediate cooling of the compressors in the gas-turbine group), it is assumed that with equal excess air factors and equal initial steam conditions an equal quantity of fuel is consumed in both stations. Then if the outlet gas temperatures are equal, the associated losses are also equal. A comparison is then made between the thermal efficiencies of a gas-fired steam station, a gas-turbine installation and a combined steam-gas installation, the schematic diagram of which is given in Fig.1. This installation consists of a gas-turbine group, a condensing-type steam turbine, a high-pressure steam generator and regenerators. The gas and air are compressed in the compressors of the gas-turbine stage and after heating in the regenerators are delivered to the steam generator, which serves also as the combustion chamber of the gas turbine. The combustion products are used successively as heat-transfer medium for steam raising and as working substance for the gas-turbine installation. The steam

Steam-Gas Condensing Power Stations and Their Comparative Thermal Efficiencies

generator reduces the temperature of the combustion product to a value suitable for the gas turbine. After the combustion products have expanded in the gas turbine and passed through the regenerators they are discharged to atmosphere. The thermal circuit of the steam stage is normal. Comparative thermal efficiencies of the three types of station are then calculated. The ratio between the outputs of the gas turbine and the steam turbine affects the thermal efficiency in the manner plotted in Fig.2. A general comparison of the thermal efficiencies of the three types of station for different conditions is seen in Tables 1 and 2. Table 2 compares a combined and a gas-turbine station for different ratios of heat consumption in the steam- and gas-turbines. The procedure described above was used to make a general evaluation of the thermal efficiency of a combined station. The influence of individual parameters of the cycle on the efficiency were considered. The particular factors discussed included: the excess-air factor; the use of higher steam conditions and the use of a more efficient

Steam-Gas Condensing Power Stations and Their Comparative Thermal Efficiencies

gas stage. Calculated values of efficiency for combined steam-gas stations are plotted in Figures 6 and 7. The calculations relate to gas obtained by underground gasification of coal. The conditions assumed in the calculation are stated. The graphs may be used to compare the efficiencies of steam, gas and combined stations for different steam conditions and gas-turbine operating conditions. The curves in fig.8 show the range of efficiency of combined and gas-turbine stations. It is concluded that in the combined station, the greatest fuel economy results from the use of medium and high initial steam conditions; also that the thermal efficiency of the combined steam-gas systems is then higher than that of a gas-fired steam station. The range in which the combined station is most efficient is somewhat extended when heat is delivered to the gas stage in two steps. Combined installations give higher fuel economy than gas turbines having low inlet temperatures. The output of combined stations is

Steam-Gas Condensing Power Stations and Their Comparative Thermal Efficiencies

governed by the unit output of the steam stage and their use will be most effective in power stations of small and medium output. There are 8 figures, 2 tables and 1 Soviet reference.

ASSOCIATION: Moskovskiy inzhenerno-stroitel'nyy institut (Moscow Civil Engineering Institute); Energeticheskiy Institut AN SSSR (Power Institute Ac.Sc. USSR)

[illegible], [illegible]

[illegible] - [illegible]

"[illegible] 'SDT IP-1' [illegible]. [illegible]

[illegible] List of Russian Accessions, Library of Congress, [illegible]tober 1952. UNCLASSIFIED.

"The Effect of Certain Procedures for Sending Carrot Seed on the Seed and Species Quality of the Seedlings." Cand Ag Sci, Gor'kiy Agricultural Inst, "In Culture USSR, Gor'kiy, 1953. (KL, No 10, Mar 54)

So: Sum. No 670, 2 Sep 54 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

BERMAN, L.D., doktor tekhnicheskikh nauk; STOLYAROV, B.M., inzhener.

Experimental data on the effect of a flow of substance on the heat and mass exchange during condensation. Teploenergetika 4 no.1:49-52 Ja '57. (MLRA 10:3)

(Condensation) (Steam flow)

GRISHUK, I.K., kand.tekhn.nauk; STOLYAROV, B.M., inzh.

Investigation into the operation of bubble plates.
Teploenergetika no.4:67-72 Ap '60. (MIRA 13:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.
(Feed-water purification) (Plate towers)

STOLYAROV, B.M., inzh.; SHMIGOL', I.N., inzh.

Deaerating capability of the condenser of the K-150-130 KhTGZ turbine. Teploenergetika 10 no.8:16-19 Ag '63. (MIRA 16:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.
(Condensers (Steam)) (Steam turbines)

SHLIANOV, B.M.

Protection from corrosion of the components of deaerator systems.
Energetik 11 no.9:25-26 S '63. (MIRA 16:10)

STOLYAROV, B.M.

Causes leading to decreased efficiency in the removal of free carbon dioxide from feed water at low values of bicarbonate alkalinity. Energetik 11 no.10:44-45 O '63. (MIRA 16:11)

STOLYAROV, B.M., inzh.

Testing of the BKZ deaerator with 400 ton/hour productive capacity. Elek. sta. 34 no.7:2-4 Jl '63. (MIRA 16:8)

[illegible], B.M., Inzh.; [illegible], I.N., Inzh.

Relubricating of ISP-400 degeneration colums. Khim. i tekh. vody. 36 no.1: 32-36 Ja '65. (MIRA 18:3)

S/080/61/034/012/012/017
D243/D305

AUTHOR: Stolyarov, B.V.

TITLE: Application of the infrared spectroscopy method to the study of the oxidation of compounds of high molecular weight

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 12, 1961, 2726 - 2732

TEXT: The author surveys and summarizes the literature published over the last fifteen years on the application of infrared spectroscopy to studying the oxidation of compounds of high molecular weight, such as rubbers and plastics. This method clarified the details of the various stages of oxidation, especially with regard to the intermediate products formed - peroxides, hydroperoxides etc. - and the linkages which occur eg. double bond and α-methyl mechanisms. The kinetic method of studying infrared spectral changes is referred to. Radiation action on plastics, thermal oxidation, photo-oxidation, as well as the action of oxidation inhibi-

Card 1/2

IOFFE, B.V.; STOLYAROV, B.V.

Isomerization during the sulfuric acid alkylation of benzene by alcohols. Zhur.ob.khim. 32 no.10:3452-3453 O '62. (MIRA 15:11)

1. Leningradskiy gosudarstvennyy universitet.
(Benzene) (Alkylation) (Isomerization)

STOLYAROV, B.V.; YAKUSHEVA, V.I.

Casting of aluminum alloy fittings. Lit. proizv. no.8:36 Ag '62. (MIRA 15:11)
(Aluminum founding)

L 13574-63 EWP(j)/EPT(c)/EWT(m)/BDS Pc-4/Pr-4 RM/WW

ACCESSION NR: AP3000188 S/0080/63/036/004/0870/0875

AUTHOR: Subbotin, S. A.; Zy"kova, S. K.; Stolyarov, B. V.

TITLE: Investigation of inhibited oxidation of octene-2 with molecular oxygen in the presence of 2,6-ditertiary butyl-4-methyl phenol (ionol)

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 870-875

TOPIC TAGS: octene-2, ionol

ABSTRACT: Oxidation reactions were run on octene-2 with molecular O in continuously circulating systems at 80 and 100 degrees with and without antioxidant to explain reaction mechanism, determine activation energy and equilibrium kinetics, and to investigate the behavior of the antioxidant. In the oxidation of octene-2, the O is added at the double bonds and at the C-atom in the alpha-methyl position with respect to the double bond. Activation energy equals 23.3 kcal per mol. The oxidation products are the bright orange stilbene quinoid type compounds, stilbene quinone, and stilbene hydroquinone. Ionol (2,6-ditertiary butyl-4-methyl phenol) decreases, and in the proportion of 5% inhibits the induction of oxidation for a substantial time;

Card 1/2

L 13574-63
ACCESSION NR: AP3000188

if it is added after oxidation is in progress, it has no significant effect on the subsequent oxidation process. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S. V. Lebedeva (All-Union Scientific-Research Institute for Synthetic Rubber)

SUBMITTED: 25Nov61 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: CH NO REF SOV: 011 OTHER: 012

Card 2/2

SUBBOTIN, S.A.; ZYKOVA, S.K.; STOLYAROV, B.V.

Effect of the products of the transformation of 2,6-ditert-butyl-4-methylphenol (ionol) on the process of the oxidation of 2-octene. Zhur. prikl. khim. 36 no.4:875-881 Ap '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V. Lebedeva.
(Cresol) (Octene) (Oxidation)

[illegible] N.V., [illegible] V., [illegible].

[illegible] by the method of [illegible]. [illegible]
911-917 [illegible]. (MIRA 19:10)

1. [illegible] Universitet [illegible].

IOFFE, B.V.; STOLYAROV, B.V.

Physicochemical properties of isomeric pentylbenzenes. Neftekhimiia 4 no.3:361-366 My-Je '64. (MIRA 17:8)

1. Leningradskiy gosudarstvennyy universitet.

IOFFE, B.V., SOKOLOV, B.V.

Isomerization and fragmentation of carbenium ions during sulfate alkylation. Dokl. AN SSSR 143 no.6:1359-1361 Ap '62. (MIRA 15:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Submitted September 25, 1961.

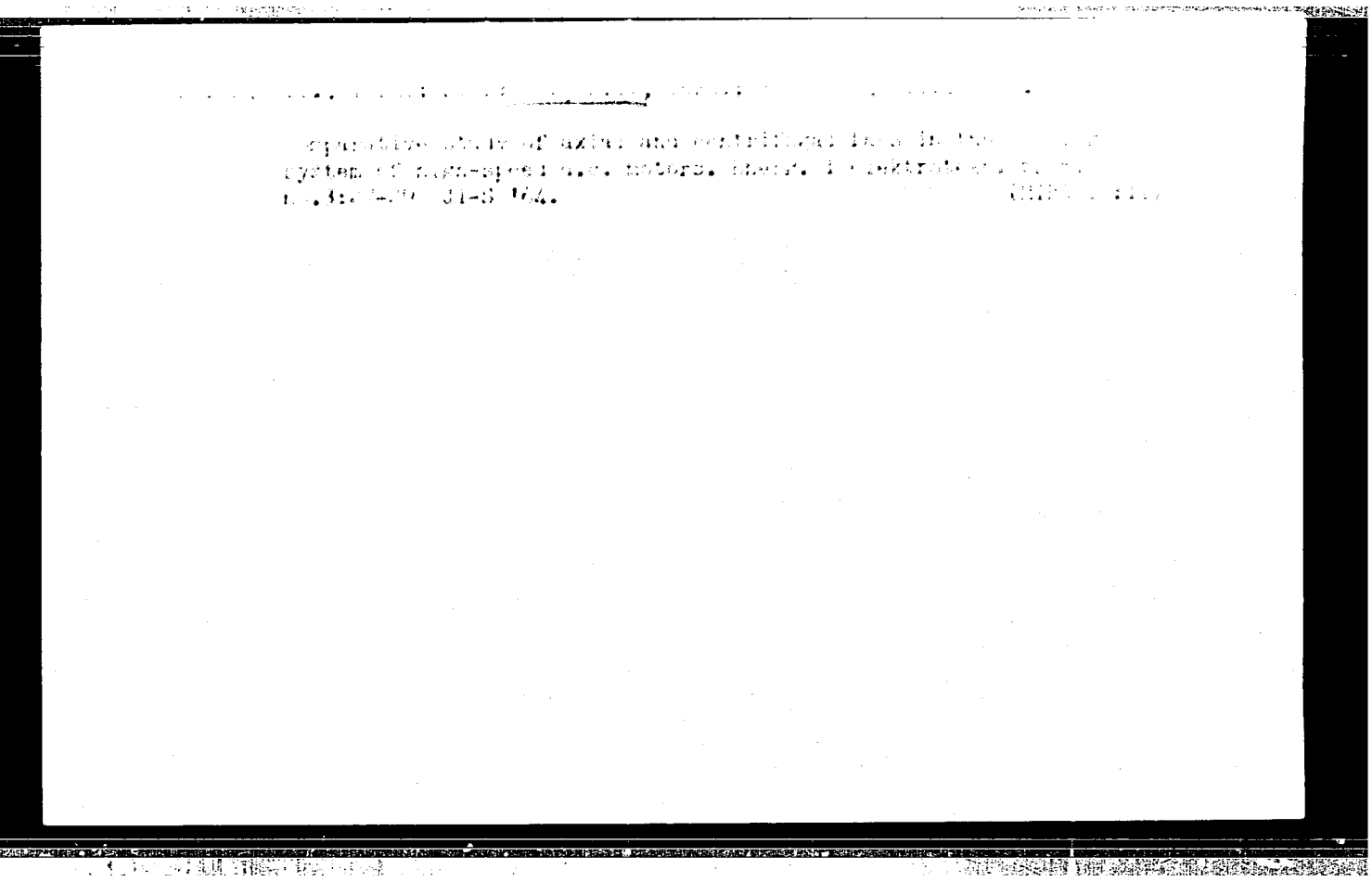
FIKHTENGOL'TS, V.S.; ZOLOTAREVA, R.V.; L'VOV, Yu.A.; STOLYAROV, B.V., red.

[Atlas of the ultraviolet absorption spectra of substances used in the production of synthetic rubbers] Atlas ul'trafioletovykh spektrov pogloshcheniia veshchestv, primeniaiushchikhsia v proizvodstve sinteticheskikh kauchukov. Moskva, Khimiia, 1965. 113 p. (MIRA 18:7)

STULYANOV, S.V., red.

[Vibrational spectra and molecular processes in rubber] Kolebatel'nye spektry i molekulianye protsessy v kauchukakh. Moskva, Khimiia, 1965. 148 p. (MIRA 18:8)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.



VDOVTSOVA, Ye.A., kandidat khimicheskikh nauk; TSUKERVANIK, I.P., professor, otvetstvennyy redaktor; SARYMSAKOV, T.A., glavnyy redaktor; RYZHOV, S.N., professor-doktor, zamestitel' glavnogo redaktora; ROMANOVSKIY, V.I., redaktor; KOROVIN, Ye.P., redaktor; MASSON, M.Ye., redaktor; KORZHENEVSKIY, N.L., redaktor; POPOV, V.I., professor-doktor, redaktor; MIROSHKINA, N.M., professor, redaktor; STOLYAROV, D.D., dotsent, redaktor; BONDARENVSKIY, G.L., dotsent, redaktor; KRASNOVAYEV, I.M., dotsent, redaktor; GEMTSHKE, L.V., dotsent, redaktor

[Radical and ionic alkylation of aromatic compounds] Radikal'nyi i ionnyi mekhanizmy reaktsii alkilirovaniia aromaticheskikh soedenenii. Erevan, Izd-vo Erevanskogo universiteta, 1953. 92 p. (Tashkent. Universitet. Trudy Srednesiatskogo gosudarstvennogo universiteta. no.43. Khimicheskie nauki, no.6)

1. Deystvitel'nyy chlen Akademii nauk UzSSR (for Sarymsakov, Romanovskiy, Korovin). 2. Deystvitel'nyy chlen Akademii nauk Turkm. SSR (for Masson). 3. Chlen-korrespondent Akademii nauk UzSSR (for TSukervanik, Korzhenevskiy).

(Arotmatic compounds) (Alkylation)

STOLYAROV, D.D.

STOLYAROV, D.D.

Methodology in the study of the history of political economy. (MLRA 10:5)
Trudy SAGU no.75:93-102 '55.
(Economics--Methodology)

STOLYAROV, D.D.

A.N. Radishchev on money, credit, and taxes. Trudy SAOU no.75:103-112 '55. (MLRA 10:5)
(Radishchev, Aleksandr Nikolaevich, 1749-1802)
(Finance)

Card 1/1

STOLYAROV, D.F.

Division of forests into groups and according to the designated purpose in Leningrad Province. Nauch. trudy LTA no.99: 21-27 '62. (MIRA 17:1)

DROZD, M.S.; SVOLYANOV, G. Yu.

Certain regularities in the dynamic hardness of steel. Izv. vys. ucheb. zav.; chern. met. 7 no.7:176-182 '64. (MIRA 17:8)

1. Volgogradskiy politekhnicheskiy institut.

STOLYAROV, G.A.

4095 [illegible]
METHOD OF MEASUREMENT OF THE FAST-NEUTRON
MULTIPLICATION FACTOR IN URANIUM - WATER
LATTICES. G. A. Stolyarov, L. V. Komissarov, V. P.
Kalashnikov, [illegible] (Nikol'skii). p.161-6 of
CONFERENCE OF THE ACADEMY OF SCIENCES OF THE
USSR ON THE PEACEFUL USES OF ATOMIC ENERGY,
JULY 1-5, 1955. SESSION OF THE DIVISION OF PHYSICAL
AND MATHEMATICAL SCIENCES. (Translation). 6p
This page was [illegible] from the Russian
and [illegible]

STOLYAROV, G. A.

Method of measuring the fast neutron multiplication factor in uranium water lattices. G. A. Stolyarov, I. V. Kompleatov, V. P. Katkov, and Yu. V. Nikol'skii. *Sessiya Akad. Nauk S.S.S.R. po Mirnomu Ispol'zovaniyu Atomnoi Energii, Zasedaniya Otdel. Fiz.-Mat. Nauk* 1955, 217-24 (English summary, 225).—Measurements for μ are given for a U-H_2O lattice of 34 × 34 × 80 cc. (cylindric blocks of U, ordinary H_2O) in a U-graphite reactor and for experimental U-H_2O reactors. The measurements agree well with each other. The following formula is valid $\mu = 1 + [N_{238}[\nu_{238} - 1 - (\Sigma_r/\Sigma_f)]/N_{235}\nu_{235}]$, where N_{238}/N_{235} is the ratio of the fission nos. for the nuclei U^{238} and U^{235} and ν_{238} and ν_{235} are the nos. of fast neutrons arising in the fission of the nuclei U^{238} and U^{235}, resp. Σ_r/Σ_f is the mean ratio of radiation capture and fission cross sections for U^{238}. Two methods for detg. N_{238}/N_{235} are presented. In one method fragments are collected on paper disks, in the other method an ionization chamber is used for counting of the fragments. In both methods layers of natural U and U low in U^{235} are used, which are placed in a slot of the U of the lattice, and the β activities are compared. Werner Jacobson

[redacted], V. I.

"Theory of Resonance Absorption in Heterogeneous Systems".

Report appearing in 1st Volume of "Session of the Academy of Sciences of USSR on the Peaceful use of Atomic Energy, 1-5 July", Publishing House of Academy of Sciences USSR, 1955.

SO: Sum 72P, 29 Nov 1955.

Stolyarov G. A.

USSR

75197
ON THE SPONTANEOUS FISSION OF THORIUM. A. V. Podgurskaya, V. I. Kalashnikova, G. A. Stolyarov, E. D. Vorob'ev, and G. N. Flerov. Zhur. Eksptl'. i Teoret. Fiz. 28, 503-5(1955) Apr. (In Russian)
The value 1.4×10^{8} yr for the half life for spontaneous fission of Th given by Segrè (Phys. Rev. 88, 21, 1952) is considered too low because of inadequate correction for cosmic rays and the presence of transuranic elements. The author's experiments suggest that the probability of spontaneous fission is extremely small and that the half life is greater than 10^{18} yr. (G.Y.)

3
62

C-5

Category : USSR/Nuclear Physics - Nuclear Reactions

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 558

Author : Katkov, V.P., Nikol'skiy, Yu.V., and Stolyarov, G.A.
Title : Determination of the Ratio of the Average Fission Cross Sections of Pu^{239} and U^{235} in Uranium-Water Lattice Blocks

Orig Pub : Atom. energiya, 1956, No 3, 61-64

Abstract : The ratio of the average fission cross sections of Pu^{239} and U^{235} was determined in uranium-water lattices of natural uranium and ordinary water. For the sake of comparison, this ratio was measured for a uranium-graphite reactor. It is established that the ratio $\bar{\sigma}_f / \bar{\sigma}_f$ for uranium-water lattices with a spacing of 45, 50, 55, and 60 mm, and for uranium-graphite reactor with a lattice spacing of 200 mm are equal to 2.24, 1.99, 1.88 and 1.79 respectively.

Card : 1/1

21(7)

AUTHORS: Berezin, A. A., Stolyarov, G. [redacted] SOV/89-5-6-16/25
Nikol'skiy, Yu. V., Chelnokov, I. Ye.

TITLE: Fission Cross Section of U^{235} and Th^{232} for Neutrons With an Energy of 14.6 MeV (Secheniye deleniya U^{235} i Th^{232} neytronami s energiyey 14.6 Mev)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 659-660 (USSR)

ABSTRACT: The fission cross section of U^{235} was measured from the ratio

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})}$$

for neutrons of equal energy. The ionization chambers, which contained U^{235} and U^{238}, were, one after another, subjected to irradiation by neutrons (d-t-reaction; ion acceleration tube. E_d = 140 keV. Angle between ionization chamber and deuteron beam 0°). Both chambers were connected with the same linear amplifier with constant impulse threshold value. The ionization chambers had thin walls. The external cylindrical electrode (diameter 2.5 cm) consisted of a platinum foil.

Card 1/3

On to the inner surface of the foil an uranium layer was electrolytically applied (the layer in the first chamber was of natural uranium, that in the second chamber contained 97 % enriched U^{235}). Length of the layer: 6.5 cm; surface density: natural uranium ~ 2 mg/cm^2, U^{235} ~ 0.5 mg/cm^2.

The chambers were housed in a graphite prism (60.60.70 cm^3). There was also a Po-Be-neutron source which was surrounded by 4 cm of paraffin. In connection with other measurements, a tritium target (ion accelerator tube) was used as a neutron source. As monitor, a proportionality counter was used, which counted the α-particles of the reaction $T(d,n)He^4$. In order to suppress the scattered neutrons, the chamber was surrounded by a Cd-sheet of 1 mm thickness and by boron carbide of 10 cm thickness.

After carrying out some minor corrections

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})} = 2.03 \pm 0.09$$

was obtained.
By using $\sigma_f(U^{238})$ for 14.6 MeV neutrons (according to reference 2), $\sigma_f(U^{235}) = 2.30 \pm 0.15$ b was obtained.

The fission cross section for Th^{232} was measured by means of an ionization chamber (for the arrangement of the apparatus see reference 2). The thorium layer precipitated on platinum (Ref 1) had a surface density of ~ 0.5 mg/cm^2 and contained 6.6 $\pm$ 0.5 mg Th. $\sigma_f(Th^{232})$ was measured as amounting to 0.37 $\pm$ 0.02 b. This result agrees well with the data of reference 3.
The results were discussed with N. N. Plerov. There are 3 references, 2 of which are Soviet.

SUBMITTED: August 7, 1958

Card 3/3

L 15886-66 EWT(1)/EWT(m)/EEC(k)-2/ETC(f)/EWO(m)/T/EWP(t)/EWA(h) IJP(c)

ACC NR: AT6002495 SOURCE CODE: UR/3136/65/000/950/0001/0006

TT/JD/WW/JO/AT

AUTHOR: Kravchenko, Yu. Ya.; Stolyarov, G. A.

ORG: Institute of Atomic Energy im. I. V. Kurchatov, Moscow (Institut atomnoy energii)

TITLE: Some data on the operation of a thermoemissive transducer with additional ionization

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-950, 1965. Nekotoryye dannyye po issledovaniyu raboty termoemissionnogo preobrazovatelya s dopolnitel'noy ionizatsiyey, 1-6

TOPIC TAGS: diode electron tube, cesium electron tube, volt ampere characteristic, molybdenum

ABSTRACT: The possibility of creating a low-temperature thermoemissive transducer for converting heat energy into electric energy is analyzed. Experimental data are presented on the effect of additional ionization on the shorting current and specific power of a cesium diode. An attempt was made to construct a transducer with the maximum specific power at the lowest possible cathode temperature by using molybdenum as the cathode material (this metal has a small thermal-neutron

Card 1/2

L 15886-66
ACC NR: AT6002495

capture cross section). A molybdenum filament was placed in the gap between the cathode and anode and heated with a half-wave current. The experiments were carried out under the following conditions: (1) cathode temperature from 650 to 1340C; (2) cesium temperature from 190 to 290C; (3) filament temperature up to 1640C; (4) anode temperature about 600C. The volt-ampere characteristics were determined. An elementary calculation of the diffusion of ions from the filament showed that the single filament used in this work does not provide a significant compensation of the space charge, and hence, does not produce maximum power. A large number of filaments will be used in future experiments in order to increase the power. Orig. art. has: 3 figures.

SUB CODE: 07, 09/ SUBM DATE: none

Card 2/2

ROTOV, I.V., kand. veterinarnykh nauk; STOLYAROV, G.F., veterinarnyy vrach

Postvaccinal immunobiologic activity of the blood of cattle in brucellosis. Veterinariia 38 no.9:23-25 S '61. (MIRA 16:8)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy institut.

LEVIN, M.S., kand.tekhn.nauk; MURADYAN, A.Ye., kand.tekhn.nauk; STOLYAROV, G.K., inzh.; KHOTYASHOV, E.N., inzh.

Electric and economic calculations of rural networks with electronic calculating machines. Mekh.i elek.sots.sel'khoz. 19 no.5:45-49 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva (for Levin, Muradyan).
(Electronic calculating machines)
(Electricity in agriculture)

L 36829-66 EWT(d)/EWP(1) IJP(c) GO/BB

ACC NR: AP6017929 SOURCE CODE: UR/0378/66/000/002/0057/0102

55
52
B

AUTHOR: Korolev, M. A.; Kuz'min K. S.; Lavrov, S. S.; Letichevskiy, A. A.; Stolyarov, G. K.; Shura-Bura, M. R.

ORG: None

TITLE: Report on the ALGEK algorithmic language 16

SOURCE: Kibernetika, no. 2, 1966, 57-102

TOPIC TAGS: algorithmic language, economics, information processing, computer application, machine translation

ABSTRACT: This paper presents a description of an algorithmic language termed ALGEK (algorithmic language for economic problems). It extensively uses the data on the ALGOL-60 language, the SUBSET ALGOL-60 (IFIP) language, and the input-output procedures developed for ALGOL. The present work also makes use of the ideas of COBOL-60 language and the input-output procedures developed elsewhere (D. E. Knuth, L. L. Bumgarner, P. Z. Ingerman, J. H. Werner, D. E. Hamilton, M. P. Lietzke, D. T. Ross, A Proposal for Input — Output Conventions in Algol-60 (A Report of the Subcommittee on ALGOL of the ACM Programming Languages Committee). Communications of the ACM, V.7, N 5, May 1964.) The proposed language may be utilized for the composition of pro-

UDC: 681.142.001:330.115

Card 1/2

STOLYAROV, G.M., inzh., red.; PEVZNER, A.S., red. izd-va; TOKER, A.M., tekhn. red.

[Manual of consolidated indices of the cost of planning and research] Spravochnik ukrupnennykh pokazatelei stoimosti proektnykh i izyskatel'skikh rabot. Vvoditsia v deistvie s 1 ianvaria 1958 g. Pt.7. [Enterprises of the coal industry] Predpriiatiia ugol'noi promyshlennosti. 1957. 26 p. Moskva, Gos. izd-vo po stroit. i arkhit. (MIRA 11:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.

(Coal)

STOLYAROV, G. V. Cand Med Sci -- (diss) "Electrical activity of the cerebral cortex during cerebral arteriosclerosis with psychic disorders." Mos, 1957. 14 pp (1st Mos Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, 45-57, 99)

STOLYAROV, O.V.

Electrical activity of the cerebral cortex in cerebral arteriosclerosis combined with mental disorders [with summary in French] Zhur.nevr. i psikh. 57 no.8:961-966 '57. (MIRA 10:11)

1. Kafedra psikhiatrii (dir. kliniki - prof. Ye.A.Popov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(MENTAL DISORDERS, etiology and pathogenesis,
arteriosclerosis of brain, EEG (Rus))
(ARTERIOSCLEROSIS, complications,
brain, causing ment. disor., EEG (Rus))
(BRAIN, blood supply,
arteriosclerosis causing ment.disord., EEG (Rus))
(ELECTROENCEPHALOGRAPHY, in var. dis.
arteriosclerosis of brain with ment.disord. (Rus))

BANSHCHIKOV, V.M.; STOLYAROV, O.V. (Moskva)

Arteriosclerotic psychoses; review of foreign literature published during 1940-56. Zhur.nevr. i psikh. 57 no.8:1044-1050 '57. (MIRA 10:11)

(ARTERIOSCLEROSIS, complications, psychoses, review (Rus))
(PSYCHOSES, etiology and pathogenesis, arteriosclerosis, review (Rus))

BANSHCHIKOV, V.M.; STOLYAROV, G.V. (Moskva)

Relation between arteriosclerotic and hypertensive psychoses. Zhur. nevr. i psikh. 58 no.1:121-128 '58. (MIRA 11:2)
(ARTERIOSCLEROSIS, complications,
psychoses, relation to hypertensivepsychoses, review (Rus))
(HYPERTENSION, complications,
psychoses, relation to arteriosclerotic psychoses, review (Rus))
(PSYCHOSES, etiology and pathogenesis,
arteriosclerosis & hypertension, interrelation, review (Rus))